

IN THE CLAIMS:

Amend the claims to read as indicated below.

1. (currently amended) A method for ultrasonically measuring the volume of a volumetric object of a body such as the heart in real time comprising:  
repetitively acquiring ultrasonic images of the heart during a heart cycle in two intersecting image planes which extend through the heart in different directions at substantially the same time with an ultrasound probe;  
using an automated processor to define corresponding object borders in the ultrasonic images during the heart cycle;  
producing a plurality of quantified measures of the volume of the heart during the heart cycle from the defined object borders in the different directions; and  
displaying the plurality of quantified measures of the continuous change in the heart volume of as the heart beats.
2. (previously presented) The method of Claim 1, further comprising producing a graphical model of the volumetric object using the defined object borders; and wherein producing quantified measures further comprises producing quantified measures using the graphical model.
3. (previously presented) The method of Claim 1, wherein displaying further comprises producing a display comprising real time images from the two intersecting image planes with a visually highlighted defined object border in each image and a quantified measure using the defined object border of the images.
4. (original) The method of Claim 3, wherein producing a display comprising a quantified measure further comprises producing a display of changes in the volumetric object as a function of time.

5. (previously presented) The method of Claim 3, wherein the display of changes in the volumetric object as a function of time comprises a graphical display, a numerical display or both a graphical and numeric display.

6. (previously presented) The method of Claim 1, wherein acquiring ultrasonic images comprises acquiring ultrasonic images of a chamber of the heart, wherein the corresponding object borders comprise the wall of the chamber of the heart.

7. (previously presented) The method of Claim 2, further comprising producing a display comprising real time images from the two intersecting image planes with a visually highlighted defined object border in each image, a real time graphical model using the defined object borders, and a quantified measure using the defined object border of the images.

8. (previously presented) The method of Claim 2, wherein producing quantified measures further comprises using the graphical model to produce a volumetric measure by the rule of disks.

9. (previously presented) The method of Claim 2, wherein producing a graphical model comprises fitting a series of curves to a wire frame structure formed by the defined object borders.

10. (original) The method of Claim 9, wherein the curves comprise ellipses or hemi-ellipses.

11. (currently amended) A method for ultrasonically measuring the volume of a volumetric object of a body comprising:  
acquiring a sequence of ultrasonic images of the heart in real time during a heart cycle in two intersecting image planes at substantially the same time with an ultrasound

probe, the intersecting image planes extending in different directions through the heart volume;

using an automated processor to define corresponding object borders in the ultrasonic images during the heart cycle; and

producing a real time graphical model of a volumetric region of the heart using the defined object borders; and

producing from the defined object borders a real time measure of the changing heart volume during the heart cycle.

12. (previously presented) The method of Claim 11, wherein using an automated processor further comprises using an automated processor to automatically trace corresponding object borders in the ultrasonic images; and wherein producing a graphical model comprises producing a wireframe model by fitting a series of curves to the traces in their corresponding image planes.

13. (original) The method of Claim 12, wherein the series of curves further comprise a series of ellipses.

14. (previously presented) The method of Claim 12, wherein producing a graphical model further comprises fitting a surface to the wireframe model.

15. (currently amended) The method of Claim 12, wherein producing a real time measure further comprising comprises producing quantified measures of the graphical model by the rule of disks.

16. (previously presented) The method of Claim 11, further comprising producing a display comprising real time images from the two intersecting image planes with a visually highlighted defined object border in each image and a real time graphical model using the defined object borders.

17. (previously presented) The method of Claim 11, wherein acquiring comprises acquiring ultrasonic images of the volumetric object in two or more intersecting image planes at substantially the same time with an ultrasound probe.